



INSTALLATION RESTORATION PROGRAM SITE STATUS

EM Gets Head Start on Landfills 2a and 2b

Work on Landfills 2a and 2b (LF2a and LF2b) was scheduled to begin in the year 2000, but the Environmental Restoration Management personnel at F. E. Warren Air Force Base are taking advantage of some money savings in fiscal year 1999 to get a head start. The money will be used to further characterize the waste thought to be at the sites and to delineate the boundaries of the landfills.

Landfill Locations

These landfills are located adjacent to a base-housing complex in

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Environmental Restoration Management personnel are taking advantage of some FY99 savings to get a head start on the cleanup of Landfills 2a and 2b. Landfill 2a, pictured above, is located next to a base housing complex.

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New Management Action Plan for F. E. Warren Approved

In January 1999, the 90th Space Wing / Environmental Restoration Management (90 SW/EM) published a revised Management Action Plan (MAP) that is now available to the public. The purpose of the MAP is to aid in implementing a final remedial action plan for the installation. The plan summarizes the current status of the base environmental restoration and compliance programs, and presents a comprehensive

strategy for completion of work under the Installation Restoration Program (IRP). The MAP also includes schedules for various parts of the program to include the revised Master Restoration Schedule and projected costs.

The MAP is available for public viewing in the Administrative Record at the Laramie County Library or can be read by contacting 90 SW/EM and arranging an appointment. ☐

EM Gets Headstart on Landfills 2a and 2b

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the southern part of the base. LF2a lies on both sides of the unnamed tributary to Crow Creek between Old Glory Road and an unnamed gravel road. LF2b is a triangular area bounded by the confluence of Crow Creek and the unnamed tributary, Missile Drive, and the unnamed gravel road. The landfills were in use from 1900 to 1941. They are suspected to have

been a fill-type operation with some burning. While the landfills were active, they received all waste generated at the base. There is evidence of landfill material on both sides of the unnamed tributary channel. When landfill operations ceased, the site was covered with soil and seeded.

While sampling in the area of the landfills has been done previously

with some contamination of groundwater evident, more data is needed before a cleanup plan is selected. Depending on sample results, the cleanup may require full or partial excavation of the wastes due to the proximity of the unnamed tributary and the fact that part of LF2b is in the Crow Creek flood plain. A possibility could be to remove the waste, co-locate it with Landfill 5a (LF5a), and cap it at that location on base. LF5a is located in the southwest portion of the base. Consolidating the waste with an existing landfill on base would eliminate the need to haul it great distances, further impacting other public landfills.

Status Updates

We will keep you informed of the sampling results and the selected remedy for your comment before we proceed with construction. The Project Manager for LF2a and 2b is Ernesto Perez. ☐



Landfill 2b is partially located in the Crow Creek flood plain. Sampling at both Landfills 2a and 2b will start this summer.

Public Health Assessment for F. E. Warren Underway

The Agency for Toxic Substances and Disease Registry (ATSDR) has begun a Public Health Assessment of F. E. Warren Air Force Base to determine if activities that have occurred at the facility may have a negative impact on the health of people in the surrounding area. ATSDR is an arm of the Public Health Service comprised of 10 regional offices. F. E.

Warren falls under Region 8 out of Denver Colorado.

Agency Mission

The mission of ATSDR is to prevent exposure and adverse human health effects and diminished quality of life associated with exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution present in the

environment. Their function is authorized by four different statutes, but primarily by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). CERCLA requires the ATSDR to do an assessment of all Federal Facilities that are on the National Priorities List (NPL).

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Base Environmental Cleanup Team Spotlight: Ernesto Perez

Beginning this quarter we will feature one member of our team in each issue to familiarize you with the background and experience these professionals bring to our environmental cleanup effort. This quarter we spotlight Ernesto Perez, HQ AFCEE/ERD Project Manager.

Ernesto Perez, an Air Force Center for Environmental Excellence (AFCEE) Project Manager, was born in Ponce, Puerto Rico and completed his first 11 years of school in Puerto Rico. His family moved to Bay City, Texas where Ernesto finished High School. In 1985 he graduated from Texas A&M University with a Bachelor of Science in Bioengineering, following in his father's engineering footsteps. From 1986 to 1989 he performed the duties of Project/Test Engineer and Biomedical Engineer for various Air Force Human System Center Projects. One of his tasks was to help redesign the helmet and mask for combat aircraft.

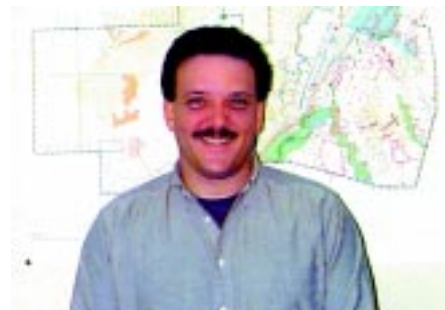
Ernesto's Early Career

From 1989 to 1996, Ernesto was

an Environmental Engineer/Project Engineer/Team Leader supporting AFCEE. He was involved in executing the environmental programs at Eielson AFB in Alaska, Scott AFB in Illinois, and Dover AFB in Delaware. In this job he gained valuable experience in many aspects of environmental restoration, including hazardous spill sites and landfills, and appropriate remedial actions. In 1994 he took on a challenging job under contract with the Air Force supervising environmental engineers and scientists conducting environmental project management. His vast area of responsibility included Air Mobility Command, Air Combat Command, Air Force plants, and other Air Force bases.

Ernesto Comes to F. E. Warren

In 1996 Ernesto came to F. E. Warren as a Field Environmental Engineer responsible for the management of the Technical Directive (Task Assignment) for the System Engineering Technical Assistance Contract for the base.



Ernesto Perez, HQ AFCEE/ERD Project Manager.

As such, he performed the technical evaluation of contractors' proposals, inspected and recommended acceptance of the projects, and coordinated activities between personnel involved in the restoration program. In April 1998, Ernesto assumed his current position as Project Manager. He has executed the Remedial Action plan for two of our success stories, Landfills 2c and 5a, and is currently the Project Manager for Zones B and D2, Landfill 6 cover, LF2a, and LF2b. His vast experience has been a valuable asset to our environmental cleanup.

Ernesto is married to Wende Perez and has two children, Taylor and Jake, and a third that is due to arrive in July. ☐

Base Gets New WDEQ Restoration Program Manager

Mark Thiesse, our temporary Wyoming Department of Environmental Quality (WDEQ) Restoration Program Manager has moved back to his normal duties at Lander. Thanks for your help Mark! Dan Moore replaces him. Dan started at WDEQ on February 8, 1999 as an Environmental

Program Principal in the Groundwater Pollution Control Program.

Dan's Background

Dan was born a handsome young lad in Madison Wisconsin and spent his formative years learning the values of hard work and modesty. (His words, not ours.) He

received his Bachelor of Science in Geology from the University of Wisconsin, Madison in 1989 and his Master of Science in Geology from the University of Kentucky in Lexington in 1991. His research subject was defining and mapping underground aquifer characteris-

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EPA's Remedial Project Manager Wins Prestigious Award

The following announcement comes from the U.S. Environmental Protection Agency (EPA) Region VIII office.

The EPA 1999 National Notable Achievement Award for Remedial Project Manager (RPM) goes to Robert Stites of Region VIII. He is the 1999-RPM of the year for work done in 1998. Rob, who has been with EPA since 1989, received his award at a ceremony in Washington, DC on April 15, 1999.

Background

For eight years, Rob served as the EPA RPM for the Hill AFB NPL site in Ogden, Utah. In June 1998, he assumed RPM duties for F. E. Warren. Rob's unique qualifications make him the ideal RPM for this site. He brings to this challenge not only his extensive experience with and knowledge of

CERCLA and the Air Force, but also two years' experience with WDEQ, as well as the respect of colleagues in other agencies and with technical contractors.

Honors

Rob has received several distinctive honors acknowledging the excellence of his RPM achievements:

- From Hill AFB — an Outstanding Achievement Award for his contributions to the Hill AFB IRP.
- From the State of Utah — a Letter of Commendation for his excellent work in partnership with the state.
- Regarding F. E. Warren — a Letter of Commendation from the Wing Commander and a Letter of Commendation from the Chief of the Environmen-



Rob Stites, EPA Region VIII Remedial Project Manager of the Year.

tal Division of the HQ Air Force Space Command.

Rob has certainly been a tremendous addition to our Restoration Program, and we add our sincere congratulations to his well-deserved award. ☐

Public Health Assessment for F. E. Warren Underway

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F. E. Warren Assessment

In early December 1998, ATSDR representatives visited Cheyenne to begin the process. The first step was to gather all pertinent information available about hazardous substances at the site. They then notified the public through the newspapers that any person in the community with a health concern possibly relating to the base could talk one-on-one with ATSDR personnel. These

interviews were conducted on January 12 and 13, 1999.

With this information, ATSDR is now in the process of determining whether hazardous substances used at the base, have, are, or will cause any harm to people. This is primarily a process of determining if any hazardous substances had or have a pathway through air, soil, or water to people in concentrations that could have adverse health effects. This process will

identify any points at which exposure could have taken place.

ATSDR will then characterize health risks and determine needed actions to lessen or prevent human health problems. ATSDR is scheduled to publish a draft of the results and any recommendations this spring. The Agency will finalize the report this summer. The results will be presented to the Restoration Advisory Board (RAB) and published in the *ERM Update* when they are available. ☐

F. E. Warren Completes Restoration Management Peer Review

On March 2, 1999 the base Environmental Restoration Management team completed a Peer Review at Brooks AFB in San Antonio, Texas. The other participants included individuals from the Consultant Operations Division and Environmental Restoration Division of AFCEE stationed at Brooks AFB and personnel from the Environmental Division of HQ Air Force Space Command.

Peer Reviews are conducted as an independent check of long-term IRP projects. The review allows a second opinion of program plans to ensure the Air Force is conducting IRP activities in the most up-to-date, efficient, and cost-effective manner.

Review Process

Peer Reviews are required in the Remedial Investigation/Feasibility Study phase if the cost exceeds \$500K, Remedial Design or Remedial Action phase, and the interim Remedial Action or Removal Action phase.

Peer Reviews are performed by agencies with significant practical experience conducting environmental investigation and cleanup projects using conventional and innovative technologies. Participants review the strategy, cost-effectiveness, and technical-effectiveness of each project using IRP reports, program documents, MAPs, and statements of work. Pertinent review items include regulatory compliance, risk assessment, cleanup levels, site characterization requirements, cleanup technology, and cost.

The March Peer Review looked at three projects scheduled for Fiscal Year 2000 — Landfill 5 Removal Action, Landfill 2(a, b) Removal Action, and the Surface Water Risk Assessment. These projects all received a “thumbs up” from the review team. Further reviews will be conducted on all our major projects as they proceed through the cleanup process. We will keep you informed of the results. ☐

Contribute to the ERM Update

Community involvement is vital to the success of the restoration program at F. E. Warren. This newsletter is just one of the ways the Environmental Restoration Management team shares its activities with the community.

But this newsletter is more than just a way for you to learn about the cleanup — it's a



Ed Janay, former RAB co-chair and Cheyenne resident, contributed one of the two Community Corner articles in this issue.

place for you to share your thoughts about the F. E. Warren restoration program.

On pages 6 and 7, you will see a new feature called Community Corner.

This is the place where you can contribute to the *ERM Update*. If you have an article or a letter to submit, send it to the Environmental Restoration Management office. We look forward to hearing from you. ☐

Access Information on the Internet



Information about clean-up activities at F. E. Warren, as well as other environmental information, is available from many sources on the Internet. Visit these sites to learn about what's going on at F. E. Warren and in the community:

Environmental Protection Agency
<http://www.epa.gov>

Wyoming Department of Environmental Quality
<http://www.deq.state.wy.us>

A Citizen's View of the RAB

By Ed Janay

What is the RAB? The RAB consists of WDEQ, EPA, the Air Force, myself, and other citizens of Cheyenne and Laramie County. These are the members of the Board. The RAB is mandated by Department of Defense (DoD) guidelines applying to all DoD facility-restoration programs. The RAB is an advisory body designed to act as a focal point for the exchange of information, concerns, values, and needs between the community, the military, and regulatory agencies. It is intended to bring together citizen members who reflect the diverse interests within the surrounding community. Increasing community understanding of the cleanup efforts improves the cleanup program, improves the soundness of government decisions, and ensures that the cleanup is responsive to community needs.

Restoration

What is being restored and how does it affect you, Cheyenne, and the rest of the state? First and foremost, understand that in February 1990, F. E. Warren became a Superfund site when EPA placed it on the NPL. It was placed on the NPL primarily due to the 2,300 domestic wells located within a 3-mile radius of the base that could be affected and potentially create a health risk. Keep the word potential in mind since no one at that time knew if indeed there were mean-

ingful criteria to determine the types of health dangers to the community.

Let me back off a bit and remind you of the history of F. E. Warren. The base originally belonged to the Cavalry, and then the United States Army. The Air Force inherited problems caused prior to their taking over. Did the Air Force contribute to some of the problems being addressed in the now on-going cleanup? Sure. However, no one at the time understood or realized the significance of what was taking place in the areas of contamination such as what is in old garbage dumps consisting of household wastes, cleaning fluids, paint, petroleum, and munitions. The impact of these previous activities is now being addressed.

To address these Restoration activities at F. E. Warren, the Air Force, EPA, and WDEQ are spending millions of dollars. This is the "R" in RAB. This is your tax money and your environment we are talking about. When you look at the whole picture, that is why the community of Cheyenne and surrounding area should be heavily involved as RAB members in the Restoration process.

Advisory

Our advice as community members is needed on how best to approach cleanup, how to spend our money, and how to prevent further insult to the environment.



This is the "A" or Advisory part of the RAB. The Air Force, EPA, and WDEQ work for us. Consequently, we command authority in the area of advice. You may think that your lack of expertise means you can't make a meaningful contribution given the expertise that resides in these people who make a living dealing with the environment. You couldn't be more wrong! These agencies always listen to us. Not all of your ideas may be adopted, but they are considered. It is true that we have had a few rip-roaring battles, but these have been in the interest of getting the job done in the best possible way.

Board

There is only one problem. Not enough members of the community are involved as members of the RAB. We need you to be part of the advisory board. Please come and help us. We need more citizens of Cheyenne, Laramie County and the state of Wyoming to ensure the best ideas surface, the money is spent in the best possible way, and our environment is best served. A good environment translates into quality of life

COMMUNITY CORNER

for our children, grandchildren, and us. We'll see you there. ☐

Ed Janay is a long-time Cheyenne resident and former RAB Co-chair.

RAB meetings are held every fourth Tuesday of the month, except in November when it meets on the third

Tuesday. The RAB does not meet in July and December. All RAB meetings are held from 7 p.m. to 9 p.m. in the Regency Room at the Little America Hotel and Resort, 2800 W. Lincolnway, Cheyenne.

For more information about RAB meetings or membership, contact:

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Continued Spirit of Cooperation Moves Base Cleanup Forward

By Tom Bonds,
RAB Community Co-Chair

I am pleased to have this opportunity to put a few words into the *ERM Update*. I have been associated with the Environmental Restoration Program on F. E. Warren since its inception — just ahead of the Superfund site designation. The program has changed dramatically in the last few years. Where there have just been studies and ideas for cleanup, there are now active projects. Where there have been disagreements between agencies, a spirit of cooperation now exists. The restoration program has improved. The complete environmental cleanup of F. E. Warren is now a real possibility in the next decade.

The RAB has changed as well. Initially, it was a Technical Advisory Panel. Now it functions as a Board. There are functioning committees when required. The Board is knowledgeable about restoration projects, schedules and potential problems. Thanks to Ed Janay, Dave Troyanek, John

Members of the RAB met on March 23, 1999. Pictured left to right are: Ed Janay, former RAB Co-Chair; Rob Stites, EPA RPM; Dan Moore, WDEQ RPM; and Tom Bonds, RAB Community Co-Chair.



Wright, and Bill Springer, the Board can provide the recommendations and policy direction called for in its charter. The Board can always use more members and there are efforts underway to expand membership.

The Board has decided to invite the managers of the pollution prevention programs, natural and cultural resource management, and environmental compliance programs to brief the Board on their activities. These briefings will be scheduled as an additional part of Board meetings as the program manager's time and Board agenda allows. This additional information will help ensure that the restoration programs are a part of the overall environmental efforts. These briefings can also help those program managers get some additional feedback that will only

strengthen their efforts. This enlargement of the Board's focus is a way to look at the totality of cleanup and restoration activities without losing track of its primary mission. It is a two-way communication forum. It's another step forward.

There are still many studies and remedial investigations being conducted at the base, and there will be more over the coming years. But, it seems that the difference now is that the studies are being translated into action. There will still be disagreement between agencies, but with luck, those involved can keep the goal of environmental cleanup ahead of any other concerns. I am pleased with all of these changes. I see them as positive steps in the F. E. Warren restoration process. ☐

COMPLIANCE UPDATE

F. E. Warren Helps Save Endangered Black-Footed Ferrets

By Tom Smith,
Chief, Natural Resources

The black-footed ferret has been considered one of the most endangered mammals in the United States. However, through the efforts of F. E. Warren and other federal and state agencies, much progress has been made toward its recovery.

Black footed-ferrets are members of the weasel family, along with more commonly recognized species like mink, skunk, and badger. A black mask across the face, black feet and legs, and a black tip on the tail characterize the species. The black-footed ferret may seem to look a little like ferrets found in pet stores, but they are actually a different species. Ferrets sold as pets are derived from domestic ferrets originating in Europe, while the endangered black-footed ferret is strictly North American.

The black-footed ferret has apparently never been abundant, and its nocturnal, underground habits make it difficult for biologists to study. First described by naturalists John Audubon and John Bachman in 1851, it was not reported again for 25 years.

Black-footed ferrets were once found across the Great Plains, from Texas to southern Saskatchewan and eastward from



F. E. Warren is one of ten pre-release conditioning facilities for acclimating the endangered black-footed ferrets back into the wild.

the Rocky Mountains through the Dakotas, Nebraska, Kansas, and Oklahoma. Black-footed ferrets were no doubt present at F. E. Warren in the past. Not coincidentally, where black-footed ferrets were found, so were prairie dogs. Black-footed ferrets are almost entirely dependent on prairie dogs, not only for food but also for burrows where they live. As the prairies were settled, prairie dogs were viewed as competitors with livestock for the available forage. Consequently, there have been intensive efforts to eliminate prairie dogs. Without prairie dogs, black-footed ferrets had no source of food and their numbers declined dramatically.

The black-footed ferret was listed as an endangered species in 1967

and by 1972 the species was in fact believed to be extinct. Somewhat miraculously, in 1981 a small population was discovered near Meeteetse, Wyoming. However, by 1985 this population declined drastically, and wildlife biologists from the Wyoming Game and Fish Department and US Fish and Wildlife Service started a captive-breeding program at the Department's Sybille Wildlife Research and Conservation Education Center near Wheatland, Wyoming. In 1986 and 1987 the last 18 known wild black-footed ferrets were taken from the wild. In recent years, the Sybille captive-breeding program has been administered by the US Fish and Wildlife Service as part of the National Black-footed Ferret Conservation Center (NBFFCC).

The goal of the captive-breeding program is to establish 200 to 300 breeding adults in captivity, with continuing release to the wild. In addition to the National Black-footed Ferret Conservation Center, black-footed ferrets are being reared at the National Zoo near Washington DC, as well as in zoos in Nebraska, Colorado, Kentucky, Arizona, and Canada.

The goal of the black-footed ferret recovery program is to establish 10 free ranging populations of black-footed ferrets. Research by wildlife biologists has shown that the survival of black-footed ferrets released to the wild increases dramatically if the animals are allowed to adjust to free ranging conditions. To that end, since 1992, as part of a cooperative effort with the US Fish and Wildlife Service and other federal agencies, F. E. Warren has oper-

ated and maintained a pre-release conditioning facility for black-footed ferrets. Black-footed ferrets from the NBFFCC and zoos are brought to F. E. Warren and allowed to acclimate to living in a more natural environment. The ferrets are then recaptured and released at preselected release sites. Areas with active or potential release sites include Wyoming, South Dakota, Montana, Colorado, and Utah. Currently the F. E. Warren AFB facility has a capacity to annually accommodate six females and their litters, or about 36 black-footed ferrets.

While the future holds some promise for the black-footed ferret, there are some real difficulties ahead. Since black-footed ferrets are intimately tied with prairie dogs, healthy prairie dog populations are vital to the survival of black-footed ferrets in the



The black-footed ferrets rely on prairie dogs for food, as well as using their burrows for shelter.

wild. Currently, there is considerable concern about prairie dogs nationally and investigations are underway to better understand their status.

So far the black-footed ferret program at F. E. Warren is considered a success. Through cooperative effort, the black-footed ferret is again surviving and reproducing in the wild. F. E. Warren support of the black-footed ferret and other endangered species is an important contribution to the preservation and defense of the natural resources in the state and nation as a whole. □

Base Gets New WDEQ RPM

Continued from page 3
tics below a petrochemical facility. He then spent three years working toward a Ph.D. at the University of Arizona, researching the transportation and movement of viruses through soil and groundwater.

In 1994 he started work in the Kentucky Water Resources Research Institute as a hydrogeologist in the Federal Facilities Oversight Unit at the University of Kentucky. He provided technical assistance to the Kentucky Department of Environmental Protection in its oversight of federal facilities. He assessed groundwater issues relative to the

Resource Conservation Recovery Act (RCRA) and CERCLA documents and programs for federal facilities located throughout the state. The facilities included the Department of Energy's (DOE) Paducah uranium enrichment plant, two army depots, a Navy ordinance station, Fort Knox, Fort Campbell, and Maxey Flats radioactive waste disposal facility.

The Paducah Days

The work at Paducah included all aspects of groundwater investigation and cleanup, including analysis of groundwater flow and quality data, groundwater modeling, and the development and

implementation of groundwater sampling plans. Dan also managed research contracts for work relating to Paducah, investigated innovative cleanup technologies for application at the site, and assessed geostatistical methods used in site characterizations and risk assessments. He is a Registered Professional Geologist in Kentucky, and is working on his registration in Wyoming.

Dan is bringing plenty of sheepskins and great experience in environmental cleanup to our program. His contact information is listed on the last page of the *ERM Update*. Welcome aboard Dan! □

For Additional Information ...

Information about the F. E. Warren environmental cleanup program is available for review in the Administrative Record File — the official collection of documents, data, reports and other information that supports EPA's decision on cleanup at a site. You may review the Administrative Record File at the locations listed below:



90th SW/EM

Environmental Restoration Management
6203 15th Cavalry Avenue, Building 367
F. E. Warren AFB, WY 82005

Laramie County Library

2800 Central Avenue
Cheyenne, WY 82001

For additional information about the F. E. Warren environmental restoration management program, please contact one of the following Remedial Project Managers:



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Inside: Information on F.E. Warren AFB Environmental Restoration



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